Plant Visits for Detroit Meeting to Include Dow, Ford, Chrysler

An especially interesting schedule of plant tours has been arranged in connection with the 100th Meeting of the Society, to be held in Detroit, October 9th through 12th. The Motor City has much to offer and Ben Davis, Chairman of the Plant Visits Committee, has announced trips to three outstanding industrial institutions: Chrysler, Ford, and Dow.

Chrysler Corporation

On Wednesday afternoon, October 10th, arrangements have been made for a tour of the Engineering Laboratories of the Chrysler Corporation where members will be shown the engineering research, development, and testing constantly carried on behind the final assembly lines in a giant automobile plant.

In the Chrysler Engineering Division, under the direction of James C. Zeder, vice-president and director of engineering and research, there are approximately 1600 active engineering and research operations under way at the same time; some of these require but a few days for completion while others consume weeks and often months. These activities range from fundamental physical and chemical research through the development of new materials, designs and processes for the testing of completed parts and assemblies. Of particular interest to the visiting electrochemists will be the electroplating laboratory, said to be one of the most modern of its kind in the United States.

This trip will offer an opportunity for members to see something of the part played by engineering in the production of today's automobiles.

Ford Motor Company

Scheduled for Thursday morning October 11th, is a trip to the modern water filtration and waste disposal plant recently erected by the Ford Motor Company at Monroe, Michigan.

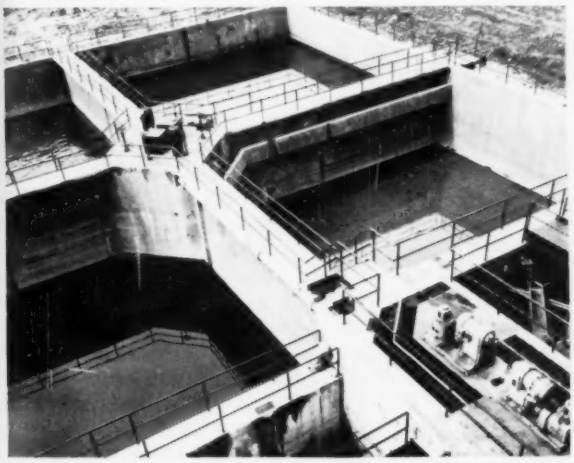
Construction of this plant began in June 1950, and a portion of it was in operation six months later. Said to be the most modern disposal unit to date, the plant is equipped with nine exterior waste disposal tanks with a total capacity of 600,000 gallons of waste water. Two additional exterior tanks, having a capacity of 5600 gallons a minute, are used for water clarification.

The filtration system, large enough to provide water for a city of 40,000 population, has a rated capacity of over 4,000,000 gallons per day; the disposal system is geared to process about 1000 gallons per minute from a waste to a purified state.

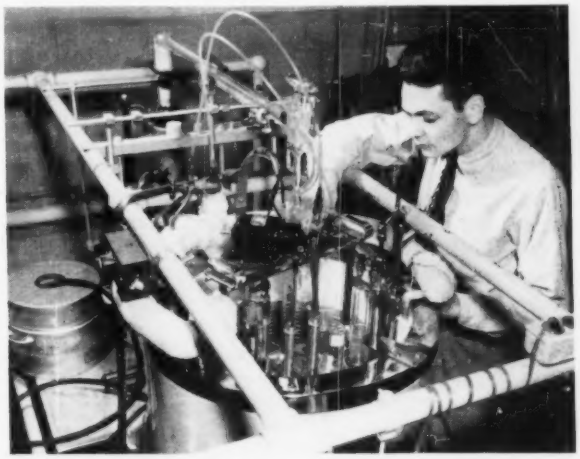
The plant area also includes two sludge lagoons which can hold 150,000 cubic feet of sludge resulting from the treatment of water and waste water. flow. The water required for the Monroe plant's plating and die-casting operations is pumped from Lake Erie to the water filtration system, where it is softened, filtered, and chlorinated, and then piped to the manufacturing plant.

The Dow Chemical Company

Through arrangements made by Dr. R. M. Hunter, members will have an opportunity to visit the parent plant of The Dow Chemical Company on October 12th. The Dow plant is located



Chromium Waste Holding Tanks at Ford Disposal Plant



Adsorption Apparatus in Use at Chrysler Laboratories

VIEW OF THE DOW CHEMICAL COMPANY PLANT AT MIDLAND, MICHIGAN

in Midland, Michigan, and is considered one of the largest, most interwoven, and yet most diversified chemical centers in the world.

The company will be host at a luncheon for Society members at the Midland Country Club at 11:30 A.M. to be followed by the tour which is being handled by Dow's Educational Department.

Although they may be altered, tentative plans include a visit to the Electrochemical department, Magnesium department, Waste Disposal plant, the Phenol and Chlorobenzol plants and the Styrene, Ethylene, Ethyl Benzene, and other related plants.

The Dow Chemical Company was founded in 1897 by the late Dr. Herbert H. Dow and the foundation of its growth and development is the brine resources of Michigan. Starting with bromine and later chlorine and caustic soda, the company has intensified its activities over the years until today it produces some 600-odd products. These products fall into five principal categories: industrial chemicals, plastics, agricultural chemicals, magnesium, and fine chemicals.

Magnesium is not produced at Midland, although the plant does considerable fabrication. Since the Dow process for magnesium now utilizes sea water, the company's production plant is located on the Gulf at Freeport, Texas.

The Midland plant employs 9000 people and utilizes more than 400 buildings located in an area of nearly 2000 acres. An average of 3,500,000 gallons of brine are pumped to the surface each day for processing. Within the plant 28 miles of railroad trackage handle more than 4000 loaded cars each month.

In the electrochemical section, society members will have a chance to see the cooling, drying, and compression of chlorine, as well as the assembled Dow electrolytic cell. This is the first time that Dow's chlorine operations will have been opened for a public inspection.

In the phenol furnace building, chlorobenzene and caustic soda are combined to make phenol, much of which goes into the production of plastics. Dow is the country's leading supplier of phenol.

The company is also a leader in the production of styrene, having pioneered the manufacturing of this chemical and turned over its production "know-how" to the industry at large to facilitate the World War II demand for synthetic rubber.

In the Magnesium department the visitors will see the impact extrusion of magnesium battery cans, and the fabrication of magnesium structural parts in Dow's rolling mill and extrusion plant.

The waste disposal system of the company handles approximately 65,000,000 gallons of water per day and involves extensive liming, settling, bacteriological filtering, and aerating processes. Dow's scientific treatment of waste materials is considered outstanding among industrial pollution control programs.

Seventy-five tickets are available for the tour. Plans are to leave Detroit at 8 A.M. and return about 8 P.M.

Technical Program

The complete technical program will be printed in the October issue of the JOURNAL. Present indications are that three full days, October 10th through 12th, will be devoted to symposia on Corrosion, Electrodeposition, and Electro-Organic Chemistry, with round tables on Primary and Secondary Batteries, Screen Engineering, and Power Supply and Requirements for the Electrochemical Industries.

Luncheons and Dinners

Highlighting the Convention from the social side will be the Carl E. Heussner Memorial Luncheon, to be held at 12:30 P.M., October 11th, and the Palladium Medal Dinner and Reception, scheduled to begin at 6:30 P.M. the same evening. At the

PAUL ACKERMAN

Heussner Memorial Luncheon, Paul Ackerman, chief engineer, Chrysler Corporation, will be the featured speaker, and at the dinner, Dr. Carl Wagner will be honored as the first recipient of the Palladium Medal (August JOURNAL, page 113C). The speaker at this time will be Malcolm Bingay, editorial director, *Detroit Free Press*. On Wednesday, October 10th, an informal dinner will be held at 7:30 P.M.; entertainment will follow at 9 P.M. Plans for Friday night, October 12th, include a tour of Detroit, which will allow members to see the city's interesting landmarks and something of the 250th Anniversary celebrations.

Ladies' Activities

The Ladies' Entertainment Committee, under the chairmanship of Mrs. Alice Pillsbury, has planned an interesting three-day round of entertainment for the feminine contingent. On Wednesday afternoon, October 10th an informal tea will be held from 3:00 to 5:00 P.M., either at the Detroit Yacht Club or at the Dearborn Inn. On Thursday morning a television program, of which an identified audience participation will be a part, will be a feature. Following this, a noon luncheon and cards are scheduled at the Country Club. Friday there will be a special luncheon, at which it is planned to have Fran Harris, WWJ-TV commentator, and a musical program. This outlined program may be supplemented with other events.

Make Reservations Early!

All technical sessions and official luncheons and dinners will be centered in the Hotel Statler. This hotel is within five minutes of all downtown theatres, department stores, and exclusive shops, and bus, railroad, and air transportation.

It is especially urged that Society members planning to attend this autumn convention make hotel reservations *now*. Inasmuch as Detroit is celebrating its 250th Anniversary, there is a constant flow of outside visitors seeking hotel accommodation—this necessitates early reservations being made to insure securing the type of accommodations you desire. Address requests to Front Office Manager, Hotel Statler, Grand Circus Park at Washington Boulevard & Bagley Avenue, Detroit 31, Michigan.

General chairman of the Detroit Convention Committee is Wright Wilson of the Auto City Plating Company, 167 Waterman Avenue, Detroit.

RCA Tube Plant Opened in Cincinnati

RCA's new electron tube manufacturing plant in Cincinnati, which will be devoted exclusively to the production of miniature and subminiature tubes, was dedicated and formally opened on June 12th. Participating in the ceremonies were top executives of the Radio Corporation of America, the RCA Victor Division, the National Broadcasting Company, Inc., and local dignitaries.

The new one-story plant occupies a tract of 17 acres and contains 136,000 square feet of floor space. Its location provides a major source of miniature electron tubes to the many producers of electronic equipment throughout the Midwest.

The plant was dedicated to the memory of John G. Wilson, late executive vice-president in charge of the RCA Victor Division, in an address by Frank M. Folsom, President of Radio Corporation of America.

New Technique in Corrosion Study

A current project at Armour Research Foundation, Chicago, on stress corrosion of aircraft alloys, sponsored by the National Advisory Committee for Aeronautics, has led to the development of an interesting new technique for the study of corrosion processes. The method is called the "rotogenerative technique," and employs a rotating cylindrical corrosion specimen scanned by a stationary reference electrode. The signal sensed by the reference electrode is amplified and presented on an oscilloscope. The resulting pattern represents the voltage distribution across the specimen surface. This method will be discussed as part of the Corrosion Symposium at the Society's Detroit meeting.

O.W.S.

1952 Conference of NACE to Be in Galveston

The Eighth Annual Conference and Exhibition of the National Association of Corrosion Engineers will be held in Galveston, Texas, during the week of March 9, 1952.

Headquarters of the conference will be the Galvez Hotel, and both the technical sessions and the exhibits of corrosion mitigation materials will be on the Galveston Municipal Pier.

The association, which has members in all parts of the United States and in 20 foreign countries, anticipates registration of over 1200 at this meeting.

Graham, Crowley Moves

Graham, Crowley & Associates, Inc., have moved their Chicago research division to greatly enlarged quarters, located at 341 East Ohio Street, Chicago 11, Illinois. This company has long been identified with the electrochemical industry, specializing in the fields of primary batteries, secondary batteries, electrodeposition, and electro-organic research.

O.W.S.

Corona Laboratories Announced by NBS

The establishment of a new National Bureau of Standards laboratory center at Corona, California, to be devoted to various phases of electronic research, development, and engineering was recently announced by Dr. E. U. Condon, Director of the National Bureau of Standards. The new research center, known as the Corona Laboratories, National Bureau of Standards, will be primarily concerned with technical problems important to the Department of Defense.

The site was transferred to NBS by the Department of the Navy. About 22 buildings are being renovated to accommodate research and development activities being transferred there from Washington.

Dr. R. D. Huntoon, formerly Chief of the NBS Atomic and Radiation Physics Division, has been named Associate Director to head the new laboratories, which began limited operations in June and will be in essentially full scale operation by September.

Firm Name Changed

Crystal Laboratories, Incorporated, Atlanta, Georgia, hereafter will be known as the Pan-Electronics Corporation, the name under which they operated during World War II. Under the same management as the original company, the concern will devote the major part of its effort to the production of commercial crystals of all kinds.

MEETINGS OF OTHER ORGANIZATIONS

World Metallurgical Congress, 33rd Annual National Metal Exposition. National Metal Congress, American Society for Metals, American Institute for Mining and Metallurgical Engineers, American Welding Society. Detroit, Mich., October 15–19.

American Standards Association, 33rd annual meeting, Waldorf-Astoria Hotel, New York City, October 22–24.

American Institute of Electrical Engineers, fall general meeting, Hotel Cleveland, Cleveland, Ohio, October 22–26.

American Society of Mechanical Engineers, annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., November 25–30.

Activities of the Board of Directors

The following are condensed minutes of the meeting of the Board of Directors, held at 10:00 A.M., June 30, 1951, in the Office of the Secretary at 235 West 102nd Street, New York City.

Revised Budget

A proposed revised budget was discussed, and it was pointed out that the budgeted deficit of $3,394 for the year 1951 is realistic. The following is the new budget, as drawn up by the Finance Committee and approved by the Board.

REVISED BUDGET FOR YEAR 1951

Income

Membership Dues	$25,000
Sustaining Memberships	6,000
Sale of Publications:	
Back Transactions	2,500
Reprints & Preprints	2,500
Nonmember Journal Subs.	8,000
Office Sale Journal	400
Modern Electroplating	600
Royalties—Cathodic Protection	800
Deutschen-Bunsengesellschaft	300
Faraday Society—Journal Subs.	500
Faraday Society Transactions	1,750
Convention Registration	3,000
Advertising	3,500
	$54,850

Expenditures—Publication

Printing & Mailing Journal	$22,000
Reprints	2,000
Salaries	10,200
Rent	855
Postage, Supplies, & Misc.	1,500
Travel	500
Publication Committee	325
	$37,380

Expenditures—Secretarial

Salaries	$12,184
Rent	855
Postage, Supplies, & Misc.	3,100
Travel	400
Auditor	175
Local Sections & Divisions	900
Prize to Young Authors	100
Program Booklets & Convention Material	1,400
Faraday Society	1,750
	$20,864

Summary

Total Income	$54,850
Total Expenditures	58,244
Budget Deficit	$ 3,394

Monograph Series

The Secretary presented a proposed contract with John Wiley & Sons, Inc., covering the publication of the recently established monograph series. This contract was approved.

On the recommendation of the Ways and Means Committee, and with the approval of the Board, the monograph series will be instituted on the following basis: When a Division sponsors the monograph, the Division will receive 40 per cent of the royalties, and the Society will receive 60 per cent. When an individual writes a monograph, the individual will receive 75 per cent of the royalties and the Society 25 per cent. The Society's share of the income will be placed in a Publication Committee fund until such time as that fund has been built up to $30,000, after which the monies will revert to the general operating fund of the Society. With regard to size and binding, it was recommended that a 6 x 9 inch book and uniform binding be encouraged. By way of clarification, it was determined that "Modern Electroplating" would fall into this category with regard to binding and size, and that the proposed "Modern Refractories" would come under the entire terms of the above decisions.

Divisional Files

The matter of storage of Divisional files was discussed, H. C. Froelich having asked the National Office for instructions regarding their disposition. On motion of Past President Faust, it was voted that only the material deemed necessary should be kept in the Divisional files and that the National Office was not to store the excess material.

By-Laws

The Secretary then brought up the matter of By-Laws as discussed at the Washington Meeting. The following rewording was presented: Article XVIII, Section 5, the second sentence should read: "Divisions may receive from the Society such financial assistance as the Board of Directors may determine to be proper, provided such request is accompanied by a financial statement covering the previous fiscal year. It is recommended that each Division submit a financial report within three months of the close of its fiscal year." Article XIX, Section 4, under (2), the sentence beginning "Such additional assistance . . ." should be replaced by the following: "Such additional assistance will be made only upon written request of the Local Section accompanied by a financial statement. This statement is due within three months of the close of the fiscal year of the Section." Article XIX, Section 11, the second sentence, "The meeting shall always precede the meeting of the Directors of the Society held at the same general meeting," shall be deleted.

Future Meetings

The Ways and Means Committee recommended that Wrightsville Beach, North Carolina, be considered for the fall meeting of 1953. In the event that this meeting does not materialize, it will be recommended that the Pittsburgh Meeting be moved to the fall of 1953 and that plans be made to meet in Cincinnati in the spring of 1954.

PERSONALS

ALBERT H. COOPER has been appointed manager of the Research Engineering Department of The Davison Chemical Corporation, Baltimore, Md. Dr. Cooper came to Davison from Bucknell University, Lewisberg, Pa., where he was head of the Department of Chemical Engineering.

MALCOLM DOLE, Department of Chemistry, Northwestern University, Evanston, Ill., addressed the South American Congress of Chemistry at Lima, Peru, in May. Dr. Dole also visited Argentina and Brazil while in South America.

WALTER K. O'LOUGHLIN has accepted a position as manager of the development department, Research and Development Division, The Davison Chemical Corporation, Baltimore, Md. Mr. O'Loughlin was recently with the intelligence department of the Air Forces and before that with Commercial Solvents Corporation, Terre Haute, Ind.

CLIFFORD A. HAMPEL, Armour Research Foundation, Chicago, Ill., is visiting a number of chemical plants in France and Italy while in Europe this summer. He is speaking on the "Chemistry of Chlorine Compounds" at the Instituto Politecnico in Milan, where

much of the pioneering work on chlorites and chlorine dioxide was carried out by Professors Bruni and Levi.

ROBERT V. JELINEK, having completed research toward the Ph.D. degree in chemical engineering at Columbia University, has joined the Development Division of the Standard Oil Development Company in Linden, N. J. For the past two years he has been an instructor in chemical engineering at Columbia.

JOHN J. NAUGHTON, recently of the Frick Chemical Laboratory, Princeton University, Princeton, N. J., has joined the Department of Chemistry, University of Hawaii, Honolulu, T. H.

N. J. KRILANOVICH of the National Bureau of Standards, Washington, D. C. has been transferred to the Bureau's newly established western laboratories at Corona, Calif.

GEORGE G. MONROE has been appointed to the staff of the National Bureau of Standards, Washington, D. C. Mr. Monroe came to the Bureau from the Department of Metallurgy, University of Pennsylvania, Philadelphia, Pa.

JAMES H. JACOBS, formerly Engineer in Charge, Manganese Research, U. S. Bureau of Mines, Boulder City, Nevada, is now associated with Union Carbide and Carbon Laboratories in Niagara Falls, N. Y., as Research Metallurgist.

NEW MEMBERS

In July 1951 the following were elected to membership in The Electrochemical Society:

Active Members

EPHRAIM BANKS, Chemistry Department, Polytechnic Institute of Brooklyn, 85 Livingston St., Brooklyn, N. Y. (Electronics)

JAMES H. BARTLETT, Department of Physics, University of Illinois, Urbana, Ill. (Theoretical Electrochemistry)

BENJAMIN F. BROWN, Engineering Research, State College, Raleigh, N. C. (Corrosion)

LYLE R. DAWSON, Department of Chemistry, University of Kentucky, Lexington, Ky. (Theoretical Electrochemistry)

GERRIT DRAGT, General Electric Company, mailing add: 1337 Beach Ave., Lakewood 7, Ohio (Electronics)

JOHN J. DROPKIN, Polytechnic Institute of Brooklyn, 85 Livingston St., Brooklyn, N. Y. (Electronics)

JAMES J. FINLEY, Carbide and Carbon Chemical Company, mailing add: 9 Biglick Rd., Crossville, Tenn. (Industrial Electrolytic)

ALFRED B. GARRETT, Department of Chemistry, Ohio State University, Columbus, Ohio (Battery and Theoretical Electrochemistry)

KARL F. HAGER, Redstone Arsenal, mailing add: 707 College Hill, Huntsville, Ala. (Corrosion)

SEISAKU HATTORI, c/o Yuasa Storage Battery Company, Ltd., Kosobe, Takatsuki-shi, Osaka-fu, Japan (Battery)

THERON LEE, JR., Temple University, mailing add: 226 W. Manheim St., Philadelphia 44, Pa. (Electrodeposition, Electro-Organic, Electrothermic, and Industrial Electrolytic)

ROBERT B. REID, Sylvania Electric Products Inc. mailing add: 21 Charnock St., Beverly, Mass. (Electronics)

LEWIS E. ROSSER, Keokuk Electro-Metals Company, mailing add: Box 361, Wenatchee, Wash. (Electrothermic)

CHARLES C. TEMPLETON, Shell Oil Company, 3737 Bellaire Blvd., Houston 5, Texas (Theoretical Electrochemistry)

SAM TOUR, Sam Tour & Company, Inc., 44 Trinity Place, New York 6, N. Y. (Corrosion and Electrodeposition)

Reinstatements

RICHARD S. ROBINSON, A. D. Little, Inc. mailing add: 122 Appleton St., Arlington 74, Mass. (Industrial Electrolytic)

M. W. RIGG, Temple University, mailing add: 3013 N. Perry St., Philadelphia 33, Pa. (Theoretical Electrochemistry)

Associate Members

WILLIAM G. ASHBAUGH, Carbide and Carbon Chemical Company, Texas City, Texas (Corrosion)

NORMAN H. KIRK, c/o Park Brothers, Ltd., Brunswick Works, Canterbury St., Blackburn, Lancs., England (Battery)

DAN E. KRAMER, Department of Chemical Engineering, Columbia University, mailing add: 50 S. First St., Bergenfield, N. J. (Corrosion)

JUAN M. NORDEMANN, Manuel Guelfi & Company, mailing add: Basilea 6282, Montevideo, Uruguay, S. A. (Battery, Industrial Electrolytic, and Theoretical Electrochemistry)

Student Associate Member

ROBERT L. RICKERD, General Electric Company, mailing add: 10914 Nelson Ave., Cleveland 5, Ohio (Electronics)

JOSEPH L. TURNER

Joseph L. Turner, 69, former technical director of National Lead Company, Titanium Division, South Amboy, N. J., died on June 12th from a heart attack. Mr. Turner had retired from active service with the company on August 1, 1949, after which he had acted as technical consultant.

Mr. Turner was born in Odessa, Russia, and was graduated from the Institute of Technology at Munich and Karlsruhe with the degree of chemical engineer. He first joined National Lead Company in 1928, became director of research of the Titanium Division in 1932, and technical director of the company in 1945.

RECENT PATENTS

Selected for electrochemists by Fred. W. Dodson, Chairman of the Patent Committee, from the Official Gazette

May 22, 1951

Ehrenfeld, R., Application 762,873, Electrolytic Method of Dehalogenating Organic Halogenides

Hough, G. H., 2,553.585, Electric Discharge Tube

Goller, G. N., 2,553,706, Stainless Steel Spring

Goller, G. N., 2,553,707, Stainless Steel Spring

Dietert, H. W., Steinmueller, R. E., and King, C. M., 2,553, 754, Moisture Meter

Patrie, J., 2,553,937, Method of Electrolytically Polishing Aluminum and its Alloys

Salauze, J., 2,554,125, Negative Plate for Alkaline Accumulator and Method of Making Same

Chemical Translations
by mail
Werner Jacobson, B.S., M.S.
Translator and Chemist
Microfilms Accepted
German, Swedish, Danish-Norwegian, French, Spanish, Portuguese, Italian, Russian, Polish, Chinese.
334 South Mozart Street Chicago 12

Schlesman, C. H., 2,553,944, Electrochemical Conversion of Hydrocarbons

Drysdale, R. F., 2,554,139, Production of Phosphate Coatings on Metal Surfaces

Taylor, C. F., 2,554,225, Calibration of Photovoltaic Cells

Blackburn, W. E., 2,554,237, Rectifier

Horstman, C. C., and Nagel, F. J., 2,554,250, Insulating Compositions for Laminations and Product Produced therewith

Longini, R. L., Hunter, L. P., and Siebert, W. M., 2,554,257, Protection of Phosphors from Attack by Alkali Vapors

Reid, A. F., 2,554,316, Production of Radioactive Halogens

Bray, E. E., 2,554,321, Measurement of Fluorescence

Chambers, L. B., 2,554,324, Piezoelectric Device of Ammonium Pentaborate Crystal

Jaffe, H., 2,554,332, Piezoelectric Device Constructed of Pentaborate Crystal

Rady, W. J., and Rice, L. A., 2,554,383, Battery Charging System

Sargent, D. E., 2,554,447, Voltaic Cell

Werner, L. B., 2,554,476, Radioactive Product and Method of Producing the Same

May 29, 1951

Ruben, S., 2,554,504, Rechargeable Cell

Fink, C. G., and Ma, C. C., 2,554,527, Method of Producing Tungsten

NOTES FROM INDUSTRY

Products

New Slide-Rule. Designed to assist those engaged in cathodic protection of pipelines, the slide-rule, called a Magnesium Anode Cathodic Protection Guide has been developed by Federated Metals Division, American Smelting and Refining Company, 560 Broadway, New York City.

With pipe size and coil resistivity known, the slide-rule gives required magnesium anode size and life, length of pipe protected, and current output. Will be sent free to those engaged in cathodic protection work. Request on company letter-head.

Voltage Regulated Power Supply. Kepco Laboratories, Inc., Flushing, N. Y. has just released a new 1000-volt, 500-milliampere regulated power supply (Kepco Model 1250) with excellent regulation, low ripple content, and low output impedance.

The high voltage supply is continuously variable from 200–1000 volts and delivers from 0–500 milliamperes. The unit includes input and output fuses on the front panel, a time delay relay, and an overload relay.

Portable Electric Oven. Grieve-Hendry Company, Inc., 1101 N. Paulina St., Chicago, Ill., has announced a new low-priced portable electric oven (Model HT) for processing at higher temperatures, such as required for stress relief

of springs and plated parts. Extremely uniform temperature throughout. Built to permit nesting of one oven on top of another. Ovens can be used in groups or operated individually at different temperatures. Temperature range from 100° to 800° F. Write for full details.

Surface Tension Instrument. The Joseph B. Kushner Laboratories of Stroudsburg, Pa., announce the development of a new instrument, the Sur-Ten Meter, for rapid, easy, and accurate measurement of surface tension. Accurate to within 5% or better, it is suitable for routine surface tension control under production conditions, where a simple and quick method is needed. Measurements can be made in less than five minutes. Low in cost and practical, in many applications it can replace delicate and costly tensimeters. Full description on request.

Personalities

Fred H. Haggerson, President of Union Carbide and Carbon Corporation, has also been elected Chairman of the Board of Directors.

Nat C. Robertson has been appointed Director of the Petrochemical Research Department of National Research Corporation, Cambridge, Mass.

Hector B. Boncher, General Manager of Dresser Manufacturing Division, Bradford, Pa., an operating company of Dresser Industries, Inc., Dallas, Texas, has been elected Vice-President of Dresser Industries, Inc.

Charles L. Kepley has been appointed chemical field engineer for A & P Finishing and Manufacturing Company, Melvindale, Michigan. The company specializes in corrosion engineering.

Armour Research Foundation of Illinois Institute of Technology, Chicago, has announced the promotion of two scientists to head the following divisions: LeVan Griffis was named manager of a new engineering mechanics division heading three new departments; E. H. Schulz heads a new physics and electrical engineering division which includes two existing departments. Max Hanson has been named assistant chairman of the metals department.

EMPLOYMENT SITUATIONS

Please address replies to box shown, c/o The Electrochemical Society, Inc., 235 West 102nd Street, New York 25, N. Y.

Positions Wanted

Electrochemist and Chemical Engineer, Ph.D., 37 years old, academic and industrial experience on design of electrolytic processes, abrasive research, and direction of graduate research. About 25 publications and patents. Will consider foreign as well as domestic employment. *Reply to Box 343.*

Physical Chemist, Ph.D. 1948, desires position with small or medium sized company in the Middle West. Three years' fundamental research on high polymers and inorganic chemicals for large eastern concern. Desires development work and more responsibility. Academic work in electrochemistry. Inactivated Naval Reservist, 30, married, family, now employed. *Reply to Box 344.*

Metallurgist, B.S. (Chem.), postgraduate work in metallurgy. Research and process development experience in the application of leaching, furnace, and electrolytic methods to the recovery of and refining of copper, lead, tin, silver, cadmium, and other nonferrous metals. Experience, metals powders. *Reply to Box 345.*